

NEVADA DIVISION OF ENVIRONMENTAL PROTECTION

F A C T S H E E T

(pursuant to NAC 445A.236)

Permittee Name: Washoe County Utility Division
4930 Energy Way
Reno, Washoe County, Nevada 89520-0027

Permit Number: NEV40024

Permitted Unit: South Truckee Meadows Water Reclamation
Facility (STMWRF)

Location: The South Truckee Meadows Water Reclamation
Facility is located at 8500 Mira Loma Road, in
Reno, Nevada. The facility is located at the
extreme north end of what is known as the South
Truckee Meadows, north of the Double Diamond
development, and adjacent to Alexander Lake and
White's Creek. Section 4, Township 18N., Range
20E. MDB&M. Latitude: 39E27'30"N, Longitude:
119E49'30"W.

Description of Facility and Discharge:

The applicant has applied for renewal and modification of discharge permit #NEV40024. The facility is an activated sludge process plant which has been upgraded to a 4.1 million gallon per day (MGD) (30-day average) facility with the completion of a second oxidation ditch, two secondary clarifiers, a filtration facility and an expanded chlorine contact basin for disinfection. The new plant provides tertiary treatment of domestic residential and commercial sewage generated in the South Truckee Meadows service area. The tertiary treated, denitrified and disinfected effluent is delivered via reuse pipeline for landscape irrigation (reuse) on site, at several permitted golf courses, miles of common and median roadway areas, the South Valley Sports Complex, South Meadows Business Park, and other permitted sites located both east of Highway 395 and west of Highway 395 in the greater southwest Reno and southern Truckee Meadows area.

The plant utilizes an activated sludge process to biologically treat influent wastewater to tertiary treatment standards in the aerated "race track" type oxidation ditch systems to reduce BOD and nitrogen. Activated sludge generated in the treatment process is either returned to the oxidation ditch as return activated sludge (RAS), or removed as waste activated sludge (WAS), which is pumped to the Truckee Meadows Water Reclamation Facility (TMWRF) via a City of Reno sanitary sewer interceptor. Five of the old sludge concrete drying beds remain onsite for backup holding of sludge. Two new secondary clarifiers have replaced the old inbasin boat clarifiers. Sludge (WAS) will continue to be pumped to TMWRF.

After clarification, the effluent is then passed through Tertiary sand filters and the chlorine contact basins for disinfection. The treated effluent then is pumped to a wet well where it may be mixed with creek water to supplement flow, then it is pumped into the effluent export pipeline for reuse deliveries during the irrigation season. The lined Huffaker Reservoir adjacent to the plant provides winter and emergency storage for the treated effluent.

The addition of facility components with plant expansions have increased the maximum design capacity of the treatment plant from 3.52 MGD to 4.5 MGD maximum design flow. The disinfection standards for STMWRF effluent now meet Class A effluent with a Total Coliform limit of 2.2/23 CFU/MPN/100 ml.

In the event of a power outage, a standby diesel generator is available to operate the plant.

STMWRF Plant Outfall- Outfall 001 - after the chlorine contact basin and prior to the effluent pump station, to reuse or storage

Flow

The permitted Daily Maximum flow requested is 4.5 MGD, and the 30-day average flow is 4.1 MGD.

Receiving Water Characteristics:

The receiving waters are groundwaters of the State of Nevada at the various reuse irrigation sites and the effluent reservoir. Depth to groundwater near the plant site is approximately 2 to 7 feet below ground surface and is potable.

The groundwater is monitored quarterly at the plant site near the effluent storage reservoir in wells A, B, and C. Parameters monitored are Total Phosphorus-P(mg/l), Chloride(mg/l), Nitrate as N (mg/l), Total Nitrogen as N, Electrical Conductivity - mmho/cm, and depth to groundwater.

Procedures for Public Comment:

The Notice of the Division's intent to reissue a permit authorizing the facility to discharge to the groundwater of the State of Nevada subject to the conditions contained within the permit, is being sent to the **Reno Gazette-Journal** for publication. The notice is being mailed to interested persons on our mailing list. Anyone wishing to comment on the proposed permit can do so in writing by September 10, 2007, a period of 30 days following the date of publication of the public notice. The comment period can be extended at the discretion of the Administrator.

A public hearing on the proposed determination can be requested by the applicant, any affected State, any affected interstate agency, the Regional Administrator or any interested agency, person or group of persons.

The request must be filed within the comment period and must indicate the interest of the person filing the request and the reasons why a hearing is warranted.

Any public hearing determined by the Administrator to be held must be conducted in the geographical area of the proposed discharge or any other area the Administrator determines to be appropriate. All public hearings must be conducted in accordance with NAC 445A.238.

The final determination of the Administrator may be appealed to the State Environmental Commission pursuant to NRS 445A.605.

Effluent Limitations: Treatment Facility OUTFALL 001

| <u>PARAMETERS</u> | <u>DISCHARGE LIMITATIONS</u> | | <u>MONITORING REQUIREMENTS</u> |
|---|-------------------------------------|-------------------------|---------------------------------------|
| | <u>30-day Ave.</u> | <u>Daily Max</u> | <u>Measurement</u> |
| FLOW: | | | |
| Influent: | 4.1 MGD | 4.5 MGD | Continuous |
| Effluent: | M & R | M & R | Continuous |
| Influent: | | | |
| BOD ⁵ : mg/l | M & R | M & R | Weekly |
| TSS: mg/l | M & R | M & R | Weekly |
| Effluent: | | | |
| CBOD ₅ :*** | 30 mg/L | 45 mg/L | Weekly |
| TSS: *** | 30 mg/L | 45 mg/L | Weekly |
| pH: | Between 6.0 and 9.0 SU | | Weekly |
| Total Coliform: | 2.2 CFU/MPN/100 ml* | 23 CFU/MPN/100 ml* | Weekly |
| Nitrate as N: M & R mg/L | M & R mg/L | Monthly | |
| Ammonia as N: M & R mg/L | M & R mg/L | Monthly | |
| Total Nitrogen as N: | 10 mg/L | M & R mg/L | Monthly |
| Kjeldahl Nitrogen as N: | M & R mg/L | M & R mg/L | Monthly |
| Priority Pollutants including 13 Metals** | M & R ppm | | 4th Quarter |

~~~~~N  
otes:

\*\* (antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, zinc)

\*\*\* Permittee shall demonstrate that the 30-day average percentage removal rate is at least 85%

MGD = million gallons per day; ml = milliliters; mg/l = milligrams per liter; CFU\* = colony forming units; or MPN\* = most probable number; SU = Standard Units; M & R = Monitor & Report

| <b><u>GROUNDWATER MONITORING WELLS</u></b> | <b><u>A, B, C</u></b>     |                         |
|--------------------------------------------|---------------------------|-------------------------|
| <b><u>PARAMETERS</u></b>                   | <b><u>LIMITATIONS</u></b> | <b><u>Frequency</u></b> |
| TOTAL PHOSPHORUS-P: mg/l                   | Monitor and Report        | Quarterly               |
| NITRATE as N: See Part I.A.10.             | 10 mg/L                   | Quarterly               |
| TOTAL NITROGEN AS N:                       | 10 mg/L                   | Quarterly               |
| CHLORIDE: mg/l                             | Monitor and Report        | Quarterly               |

|                          |                    |           |
|--------------------------|--------------------|-----------|
| ELECTRICAL CONDUCTIVITY: | Monitor and Report | Quarterly |
| mmho/cm                  |                    |           |
| TDS: mg/L                | Monitor and Report | Annual    |
| DEPTH TO GROUNDWATER:    | Monitor and Report | Quarterly |

**Schedule of Compliance:**

1. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. Analysis shall be performed by a State of Nevada certified laboratory. Results from this lab must accompany the Discharge Monitoring Report.
2. Any revisions to the O & M Manual, including any revisions to the EMP shall be submitted to the Division for review and approval by December 30, 2007.

**Rationale For Permit Requirements**

Effluent monitoring is required to assess the level of treatment being provided by the STMWRF, and to determine when design capacity is being approached.

Groundwater monitoring is required to ensure that operations of the facility do not degrade groundwaters of the State.

**Proposed Determination**

The Division has made the tentative determination to reissue the proposed permit for a five (5) year period.

Prepared by: Icyl C. Mulligan  
June, 2007  
August 2007